Docket No.: 740756-1947

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of
Yukio YAMAUCHI et al.
Serial No. 09/266,012
Filed: March 11, 1999
For: THIN FILM TRANSISTOR, ORGANIC ELECTROLUMINESCENCE DISPLAY DEVICE AND MANUFACTURING METHOD OF THE SAME

) Group: 2815
) Examiner: N. Richards

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REQUEST FOR RECONSIDERATION AFTER FINAL

Honorable Assistant Commissioner of Patents
Washington, D.C. 20231

Sir:

In response to the Office Action dated July 18, 2001, reconsideration based on the following comments is respectfully requested. Claims 1-3 and 6-14 are pending in the application.

The Office Action rejects claims 1, 3 and 12 under 35 U.S.C. §103(a) as unpatentable over Applicants' allegedly admitted prior art in view of U.S. Patent No. 4,511,756 to Moeller et al. (hereinafter "Moeller"). This rejection is respectfully traversed.

The Office Action contends that it would have been obvious to use a barrier comprising titanium or titanium nitride in place of the chromium barrier of the Applicants' allegedly admitted prior art in view of the teachings of Moeller. However, Applicants respectfully submit that it is insufficient for the Office to make this conclusion simply because the titanium or the titanium nitride were well known for a barrier material.

The claimed invention was based on the recognition of a problem which is peculiar to organic EL devices as discussed in the background section of the Applicants' specification. More specifically, titanium or titanium nitride was selected as a barrier material in an organic EL device to avoid the deterioration of the barrier which tended to occur due to moisture.

In contrast, Moeller merely teaches the use of the titanium nitride as a barrier for a back contact material of a solar cell. Moeller does not discuss the deterioration problem of the barrier due to moisture. Additionally, Moeller does not teach any specific advantage of using the titanium nitride as the barrier material over other materials such as chromium. As recognized by the Examiner "the

motivation for doing so is to prevent diffusion of aluminum into the silicon source or drain region." For example, as discussed on col. 1, lines 58-col. 2, line 2 of Moeller, "in additional to preventing aluminum diffusion into an amorphous silicon body, the utilization of a titanium nitride layer is also exploited in regards to the relatively intense hardness exhibited by such a layer to render the subsequently applied amorphous silicon cell substantially insensitive to mechanical loads as arise, for example, during the application of a mask in the fabrication of upper surface electrodes. The advantages of a titanium nitride layer, in comparison to a pure titanium layer, include a greater barrier effect exhibited by titanium nitride as well as the fact that the crystalline size of the titanium nitride is relatively small, i.e., a titanium nitride layer is mirror smooth."

Applicants respectfully submit in accordance with MPEP 2143.01 "there are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of the persons of ordinary skill in the art." *In re Rouffert*, 149 F.3d 1350, 1357, 47 U.S.P.Q. 2d 1453, 1455-58. Applicants respectfully submit that none of the three possible sources for motivation to combine the references are present, or have been established by the Office. In particular, the cited references actually teach away from the problem to be solved as discussed above. The Office has provided no teaching of using titanium nitride to avoid deterioration of a barrier which tended to occur due to moisture. The Office has not provided any evidence that it is well known to use titanium nitride in this manner or well known to one of ordinary skill in the art. Accordingly, and for at least these reasons, Applicants respectfully submit that the Office has failed to provide the necessary factors to support a rejection under §103(a). Withdrawal of the rejection of claims 1, 3 and 12 under 35 U.S.C. §103 is respectfully requested.

The Office Action rejects claim 2 under 35 U.S.C. §103(a) as unpatentable over Applicants' allegedly admitted prior art with Moeller and further in view of U.S. Patent No. 5,550,062 to Tang et al. (hereinafter "Tang"). This rejection is respectfully traversed.

Applicants respectfully submit that Tang fails to overcome the deficiencies of the references cited in relation to the rejection of claims 1, 3 and 12. Accordingly, and by virtue of claim 2 depending from claim 1, and the additional feature(s) that claim 2 recites, Applicants respectfully submit the cited references fail to teach, suggest or disclose each and every aspect of

the claim. Accordingly, the cited references fail to render obvious claim 2. Withdrawal of the rejection of claim 2 under 35 U.S.C §103(a) is respectfully requested.

The Office Action rejects claims 6-9, 13 and 14 under 35 U.S.C. §103(a) as unpatentable over Tang with Applicants' allegedly admitted prior art and further in view of Moeller.

Applicants respectfully submit that the arguments above with respect to the rejection of claims 1, 3, and 12 are also applicable to the rejections of claims 6-9, 13 and 14. In particular, Applicants respectfully submit that it would not have been obvious to replace the chromium barrier of Applicants' allegedly admitted prior art with the titanium nitride barrier of Moeller.

Accordingly, Applicants respectfully submit that since the cited references fail to teach, suggest or disclose each and every aspect of claims 6-9, 13 and 14, the references fail to render obvious claims 6-9, 13 and 14. Withdrawal of the rejection of claims 6-9, 13 and 14 under 35 U.SC. §103(a) is respectfully requested.

The Office Action rejects claims 10-11 and under 35 U.S.C. §103(a) as unpatentable over Tang in view of U.S. Patent No. 4, 042,854 to Luo et al. (hereinafer "Luo). This rejection is respectfully traversed.

The Office Action asserts that Luo teaches a peripheral circuit comprising thin film transistors. However, Applicants respectfully submit that the portions identified by the Office Action are directed toward an analog video signal register 24 and the accompanying description of Fig. 2 relates to the configuration of a display panel. Luo does not teach a "peripheral driving circuit comprising another thin film transistors formed over said substrate for supplying a signal to one of said ex-direction signal line and said y-direction signal line" as claimed.

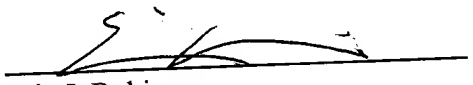
Accordingly, since the cited references, either alone or in combination fail to teach, suggest or disclose each and every aspect of the invention, the cited references do not render obvious claims 10 and 11. Withdrawal of the rejection of claims 10 and 11 under 35 U.S.C. §103 is respectfully requested.

Accordingly, Applicants respectfully submit that the application is in condition for allowance. Prompt and favorable reconsideration are respectfully requested.

Should the Examiner believe anything further is desirable in order to place the application in even better condition for allowance, the Examiner is encouraged to contact Applicants' undersigned representative at the telephone number listed below.

Respectfully submitted,

NIXON PEABODY, LLP



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